

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Takayuki Gomi et al. ATTORNEY DOCKET NO.: P97,2608

SERIAL NO: 08/965,286 GROUP ART UNIT: 2811

FILED: November 6, 1999 EXAMINER: W. Fahmy

INVENTION: BIPOLAR TRANSISTOR AND METHOD OF THE SAME

AMENDMENT

Assistant Commissioner of Patents
Washington, D.C. 20231
S I R:

In response to the Office Action mailed on April 7, 1999, Applicants herein amend the above-identified application and respond as follows:

In the Claims:

Please amend claim 1 as follows:

1. (Amended) A semiconductor device, comprising a first vertical type high speed NPN bipolar transistor and a second vertical type high voltage NPN bipolar transistor whose breakdown voltage is higher than [different from] that of said first vertical type bipolar transistor, [formed on a semiconductor substrate made by forming] the device including an epitaxial layer formed on a silicon substrate, wherein said first vertical type bipolar transistor has a first embedded diffusion layer formed in an upper part of said silicon substrate, said first vertical type bipolar transistor having [and of] the same conductive type as said epitaxial layer and having an impurity concentration higher than that of said epitaxial layer, said second vertical type bipolar transistor has a second embedded diffusion layer formed in an upper part of said silicon substrate, said second vertical type bipolar transistor having [and of] the same conductive type as said epitaxial layer[,] and [the] having an impurity concentration [of said second embedded diffusion layer is different from] less than the impurity concentration of said first embedded diffusion layer.

Please cancel claim 2, without prejudice.

Please amend claim 3 as follows:

3. (Amended) A semiconductor device according to claim 1, wherein a [the] depth of said first embedded diffusion layer is shallower than a [the] depth of said second embedded diffusion layer.

Please amend claim 4 as follows:

In line 1, cancel "claim 3" and substitute therefor --claim 1--.

Please cancel claim 5, without prejudice.

Please amend claim 6 as follows:

In line 1, cancel "claim 3" and substitute therefor --claim 1--.

Please cancel claims 7-10, without prejudice.

Please amend claim 11 as follows:

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Sub G1
B2

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In re application of: Takayuki Gomi et al. ATTORNEY DOCKET NO.: P97,2608
Serial No.: 08/965,286 GROUP ART UNIT: 2811
Filed: November 6, 1997 EXAMINER: W. Fahmy
For: BIPOLAR TRANSISTOR AND METHOD OF THE SAME

AMENDMENT

Assistant Commissioner for Patents
Washington D.C. 20231
SIR:

Transmitted herewith is an amendment in the above-identified application.

☐ No additional fee is required.

The fee has been calculated as shown below.

CLAIMS AS AMENDED						
	(2) CLAIMS REMAINING AFTER AMENDMENT		(4) HIGHEST NO. PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	ADDITIONAL FEE
TOTAL CLAIMS		MINUS			() X 9.00 () X 18.00	
INDEP. CLAIMS		MINUS			() X 39.00 () X 78.00	
Application amended to contain any multiple dependent claims not previously paid for.				() YES () NO	() \$130.00 () \$260.00 ONE TIME	
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						-0-

* If the entry in Column 2 is less than the entry in Column 4, write "0" in Column 5.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20 write "20" in this space.

- ☐ Applicant petitions the Commissioner of Patents and Trademarks to extend this time for response to the Office Action dated _____ or _____ months so that the period for response is extended to _____. A check in the amount of \$ _____ is attached to cover the cost of the extension. Any deficiency or overpayment should be charged or credited to deposit account No. 08-2290. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$ _____ is attached.
- ☐ A check for \$ _____ accompanying IDS under 37 CFR 1.97(c) is attached
- ☐ A check for \$ _____ and Petition for Consideration of IDS under 37 CFR 1.97(d) is attached.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 08-2290. A duplicate of this sheet is enclosed.
- When phoning re this application, please call 312/876-0200.

HILL & SIMPSON
Professional Corporation

BY [Signature] (Reg. No. 39,056)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on July 7, 1999

William J. Vaughan (Registration No. 39,056)

NAME OF APPLICANT'S ATTORNEY

[Signature]
SIGNATURE

July 7, 1999

DATE